

REMARKS

Claims 1, 8, 15 and 22 have been amended. Claims 1-27 remain pending in this application.

Claims 1-3 and 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hirata, U.S. Patent No. 6,240,424 ("Hirata"). The rejection is respectfully traversed.

Applicant respectfully submits that Hirata does not disclose a method of classifying an image comprising the step of, *inter alia*, "extracting a query image from a plurality of images stored in an image database in correspondence with feature data," as recited by claim 1. As noted by the Office Action, Hirata classifies images "under one primary object." (Hirata, col. 5, lines 36-40). This differs from the claimed invention in which "each group of images is represented by a respective *representative image*" and not under "one primary object," as in Hirata. The method of Hirata registers simple generic shapes (e.g., triangle, square, simple automobile shape) beforehand as the primary objects. On the other hand, the method of the present invention registers images with image features and image file names corresponding to each other. Because images are registered with image features and image file names corresponding to each other, the candidates of the target image can be narrowed down more easily and thus the target image can be found more easily unlike the method of Hirata which only relies on generic shapes registered as the primary object. Thereby, in the claimed invention, a more precise hit can be expected when searching for a target image based on inputting any of the pre-registered items. As such, claim 1 as amended should be allowable over Hirata.

Claims 2, 3 and 26 depend from claim 1 and should be allowable along with claim 1 for at least the reasons provided above. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirata in further view of Fumitomo Yamasaki et al., U.S. Publication No. 2003/0011683 ("Yamasaki"). The rejection is respectfully traversed.

Claim 4 depends from claim 1 and incorporates all limitations of claim 1. As discussed above, Hirata fails to disclose, teach or suggest all limitations of claim 1. Further, Yamasaki fails to remedy the deficiency of Hirata. Yamasaki is relied on by the Office Action to teach that the hierarchical structure is formed as layers of a directory of a file system for managing the images in the image database. (Office Action at 5). Thus, the Hirata and Yamasaki combination fails to teach or suggest all limitations of claim 1. Accordingly, claim 4 is allowable along with claim 1. Withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 5-7, 12-14, 19-21 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over NPL article titled "Recursive Space Decompositions in Force-Directed Graph Drawing Algorithms," written by K.J. Pulo ("Pulo") in further view of Vrhel, U.S. Publication No. 2003/0198384 ("Vrhel"). The rejection is respectfully traversed.

Applicant respectfully submits that the cited references do not disclose, teach or suggest the claimed invention. Claims 5, 12, and 19 recite, *inter alia*, "arranging each image included in a minimum unit of a sub-feature space to a corresponding one of the minimum units of the sub-display regions." As stated in the Office Action, Pulo does not disclose this limitation as well as other limitations in the claims. Vrhel does not remedy the deficiencies of Pulo. Applicant respectfully submits that, absent hindsight of the claimed invention, one of ordinary skill in the art would not be motivated to combine Pulo and Vrhel, because the technologies of Pulo and Vrhel are significantly different from the claimed invention. The technology of the claimed invention enables

efficient browsing of images. On the other hand, Vrhel performs a "blurring operation" on pixels of an image. (Vrhel, ¶ 0018). The blurring operation corrects "discontinuous or disjointed segments." (Vrhel, ¶ 0018). Thus, the blurring is used to sharpen the original RGB image, whereas the present invention arranges "each image included in a minimum unit of a sub-feature space to a corresponding one of the minimum units of the sub-display regions." Vrhel's blurring operation varies from the arrangement of images in the present invention. Also, Pulo teaches a method for computing a drawing of a graph. Because Pulo and Vrhel do not teach or suggest all of the limitations of claims 5, 12, and 19, claims 5, 12, and 19 are not obvious over the cited references.

Furthermore, Pulo fails to teach or suggest how to modify Vrhel to obtain the claimed invention. There is therefore no *prima facie* case of obviousness. Obviousness is based on factual findings. "Whether a patent claim is obvious under section 103 depends upon the answer to several factual questions and how the factual answers meld into the legal conclusion of obviousness *vel non*." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). The four underlying factual inquiries are: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of non-obviousness. *Graham v. John Deere Co.*, 393 U.S. 1, 17-18 (1966).

Applicant respectfully submits that there is no motivation to combine the cited references to obtain the invention of claims 5-7, 12-14, 19-21 and 27. Motivation or suggestion to combine or modify prior art references "must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002). Because the "genius of invention is often a combination of known elements which in hindsight seems preordained," the Federal Circuit requires a "rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *McGinley*, 262, F.3d at 1351.

Yet there is no teaching or suggestion within any of the references that provide a motivation to combine them.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Thus, a showing of an obvious combination requires more than just an amalgam of references, each of which provides one feature of the claimed invention.

The Office Action has done no more than cite a pair of references, each of which allegedly provides only part of the claimed invention, and allege that their combination renders the invention obvious. However, without the benefit of hindsight, there would have been no motivation to combine these references and the Office Action has failed to provide proof of any such motivation. This is one more reason why claims 5-7, 12-14, 19-21 and 27 are allowable over the cited combination.

Claims 6, 7 and 27 depend from claim 5 and should be allowable along with claim 5 for at least the reasons provided above. Claims 13 and 14 depend from claim 12 and should be allowable along with claim 12 for at least the reasons provided above. Claims 20 and 21 depend from claim 19 and should be allowable along with claim 19 for at least the reasons provided above. Accordingly, withdrawal of the rejection and allowance of the claims is respectfully requested.

Claims 8-9, 15-16 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pulo in further view of Vrhel and further in view of Hirata. The rejection is respectfully traversed.

Claims 8 and 9 depend from claim 5 and incorporate all limitations of claim 5. Claims 15 and 16 depend from claim 12 and incorporate all limitations of claim 12.

Claims 22 and 23 depend from claim 19 and incorporate all limitations of claim 19. As discussed above, there is no motivation for combining Vrhel with Pulo. The technologies of the cited references are significantly different from the present invention, which enables efficient browsing of images. Further, Hirata fails to remedy the deficiencies of Pulo and Vrhel. Hirata is relied on by the Office Action to teach classifying and querying a database of images. (Office Action at 11). However, Hirata does not disclose, teach or suggest "extracting a query image from a plurality of images stored in an image database in correspondence with feature data," as recited by claims 8, 15 and 22. Accordingly, claims 8-9, 15-16 and 22-23 are allowable along with claims 5, 12 and 19. Withdrawal of the rejection and allowance of the claims is respectfully requested.


Claims 10-11, 17-18 and 24-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pulo in further view of Vrhel and further in view of Savakis et al., U.S. Publication No. 2003/0059121 ("Savakis"). The rejection is respectfully traversed.

As discussed above, neither Pulo nor Vrhel teach or suggest "arranging each image included in a minimum unit of a sub-feature space to a corresponding one of the minimum units of the sub-display regions." Further, as discussed above, there is no motivation for combining Vrhel with Pulo. The technologies of the cited references are significantly different from the present invention, which enables efficient browsing of images. Savakis does not remedy the deficiencies of Pulo and Vrhel. Instead, Savakis is relied on by the Office Action to teach a feature space and the display space divided into three subsections. Therefore, none of Pulo, Vrhel, and Savakis, even when considered in combination teach or suggest all limitations of claims 10-11, 17-18, and 24-25. Applicant respectfully requests that the rejection be withdrawn.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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